

FIG. 1

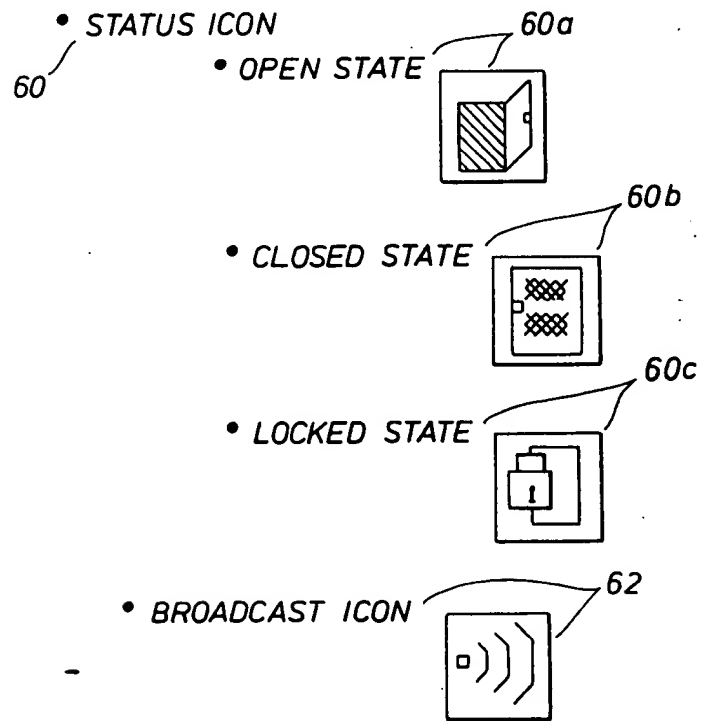
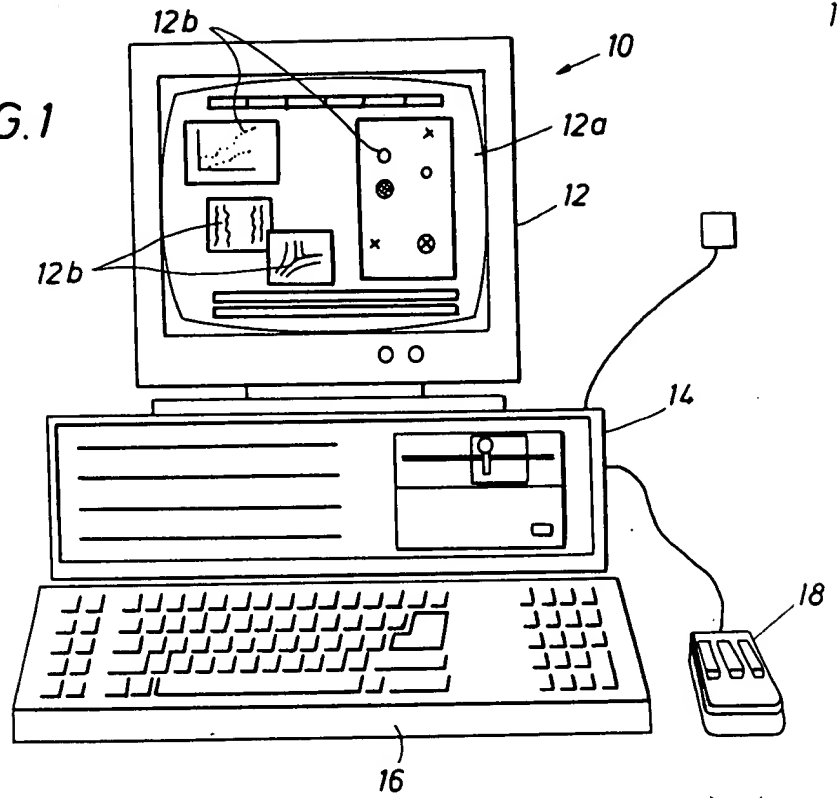
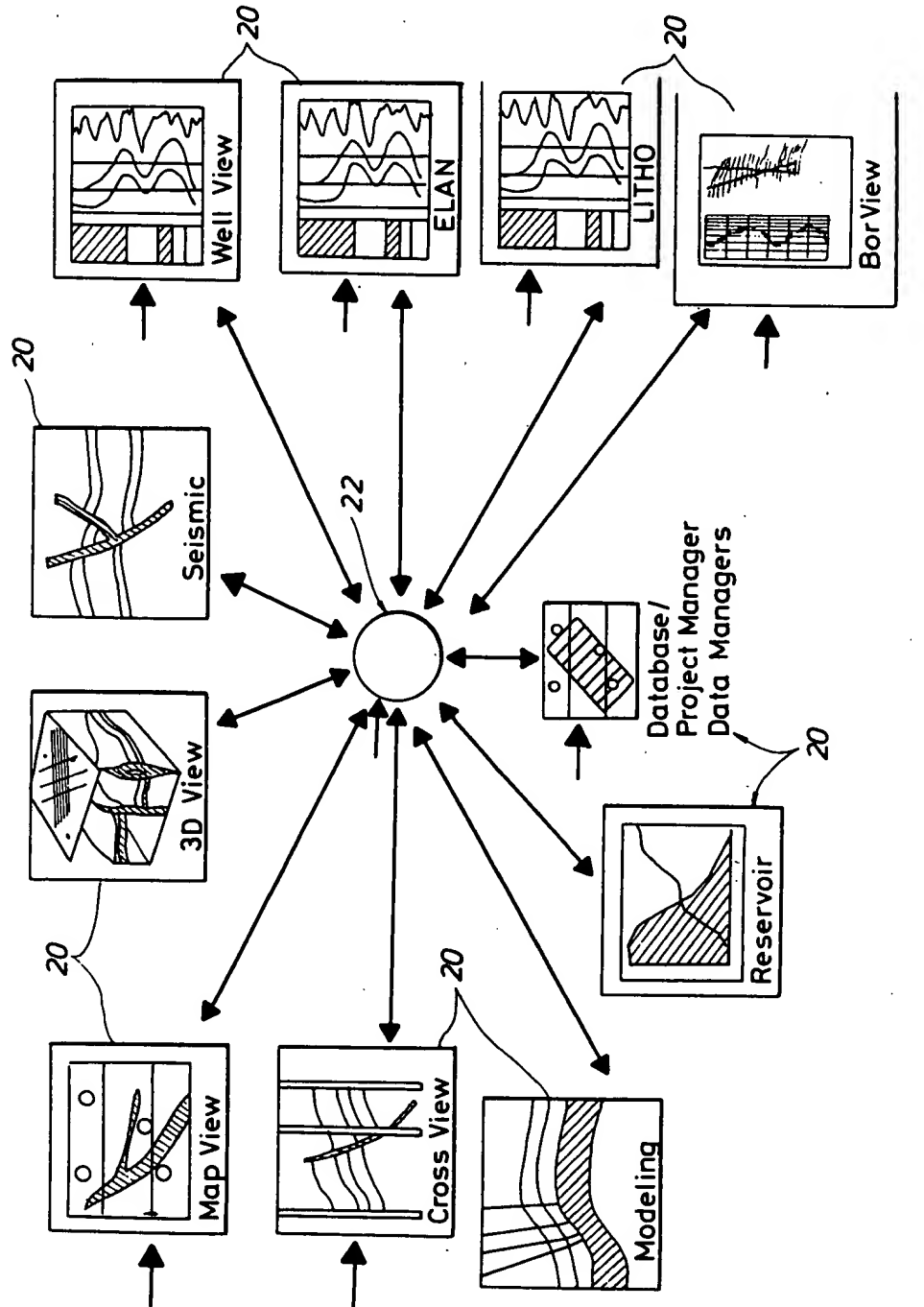


FIG. 14

FIG. 2 2/24



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FIG. 3

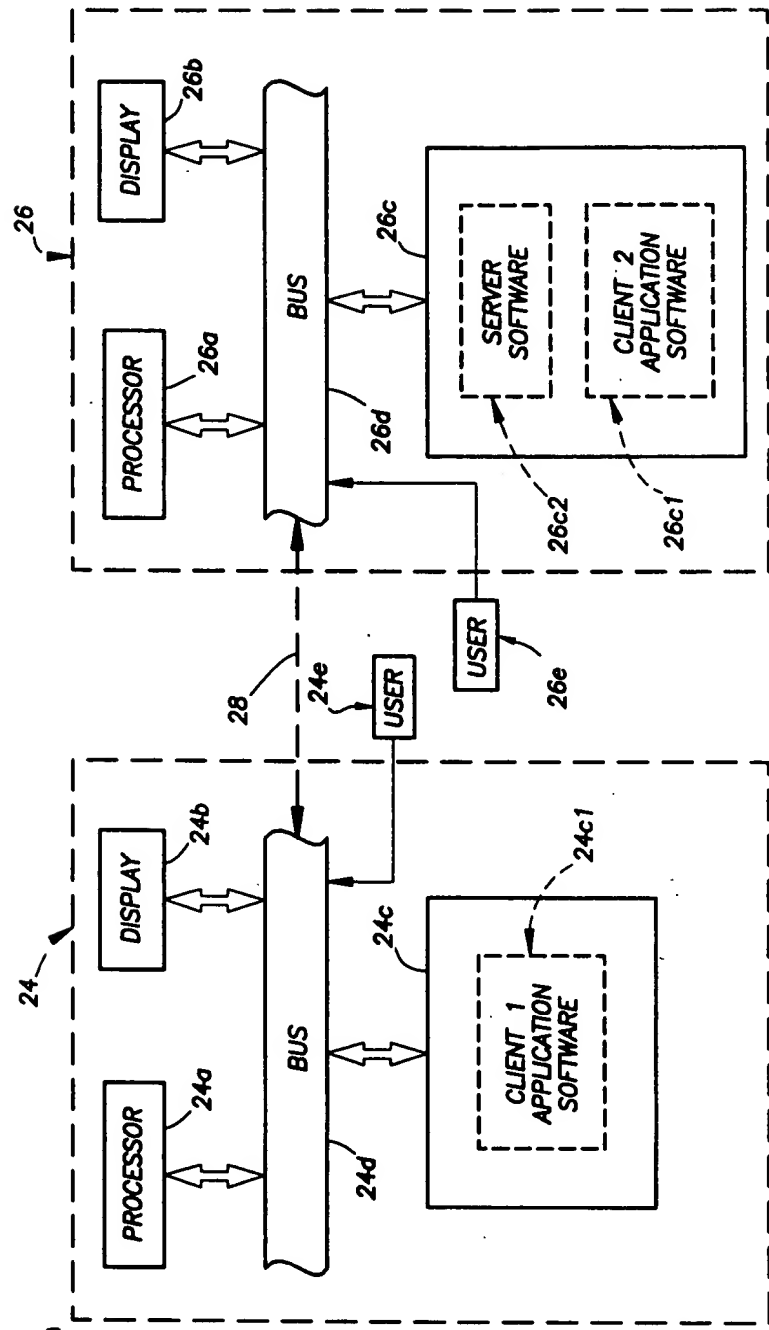


FIG. 8A

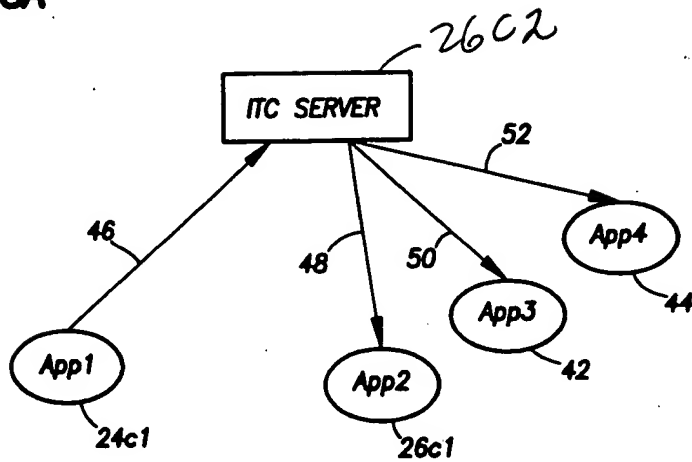
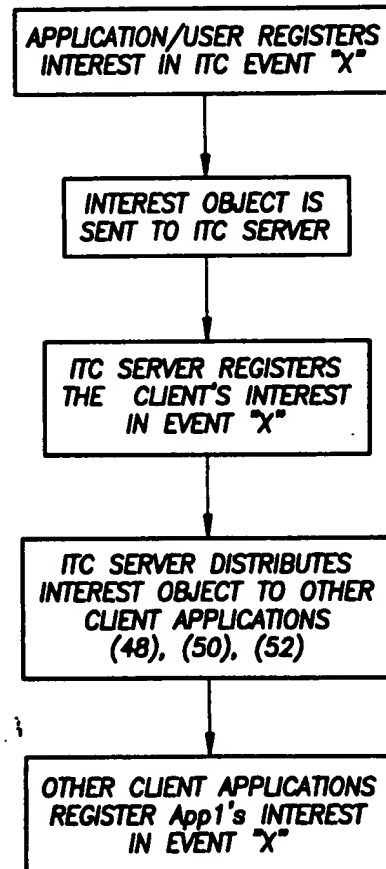


FIG. 8B



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FIG.9A

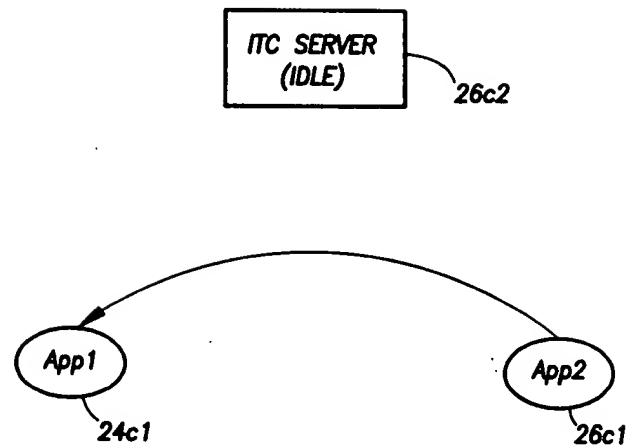
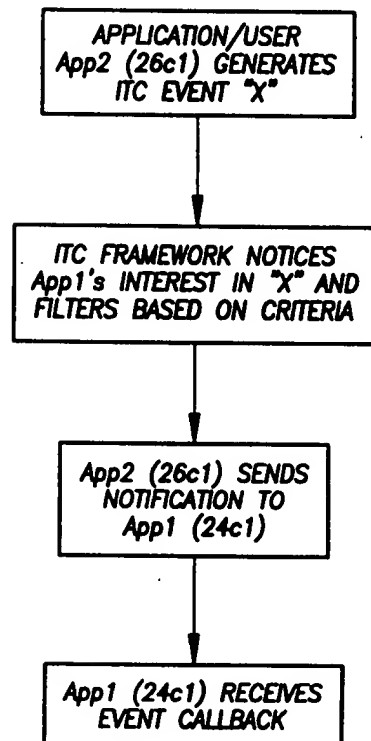


FIG.9B



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FIG. 10A

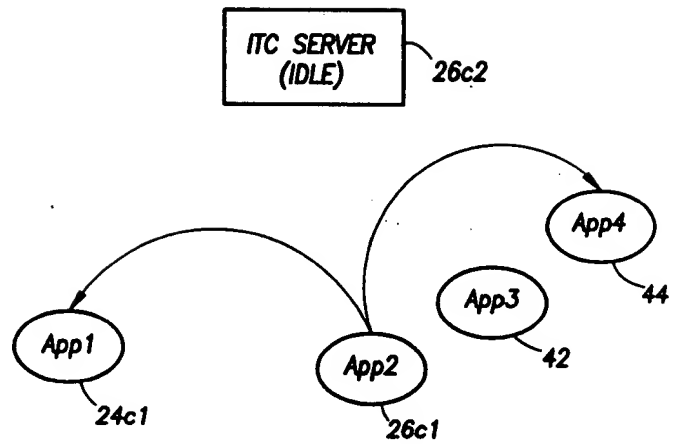


FIG. 10B

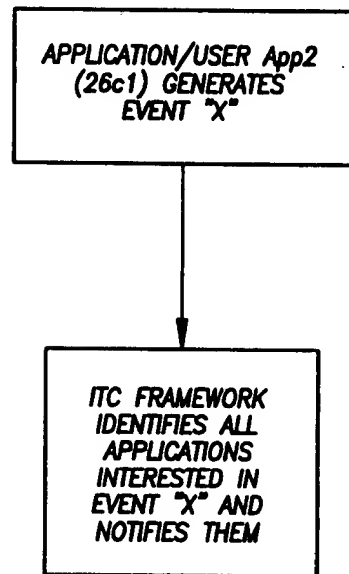


FIG. 11A

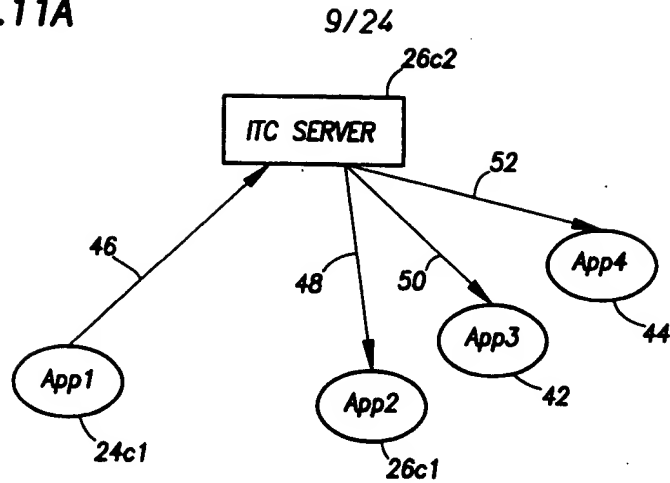


FIG. 11B

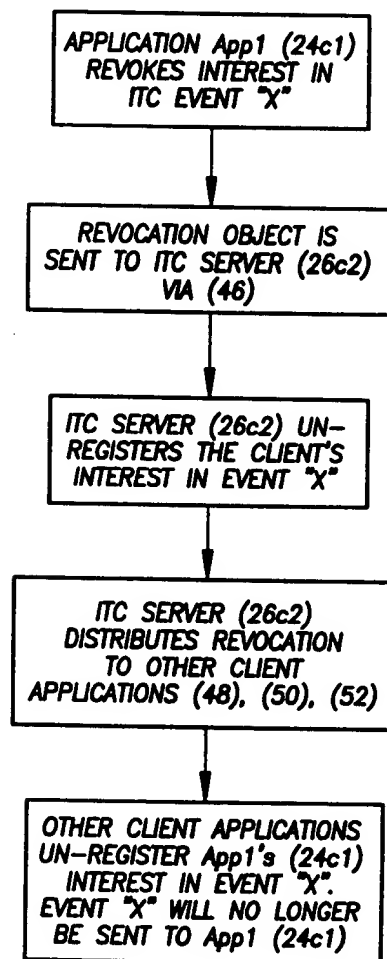


FIG. 12A

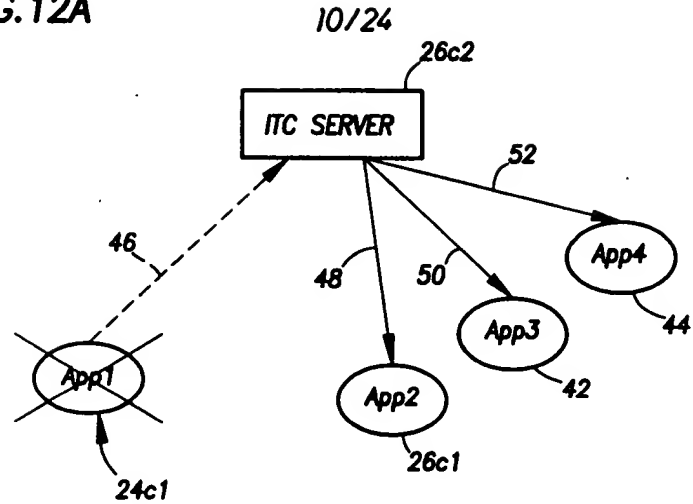
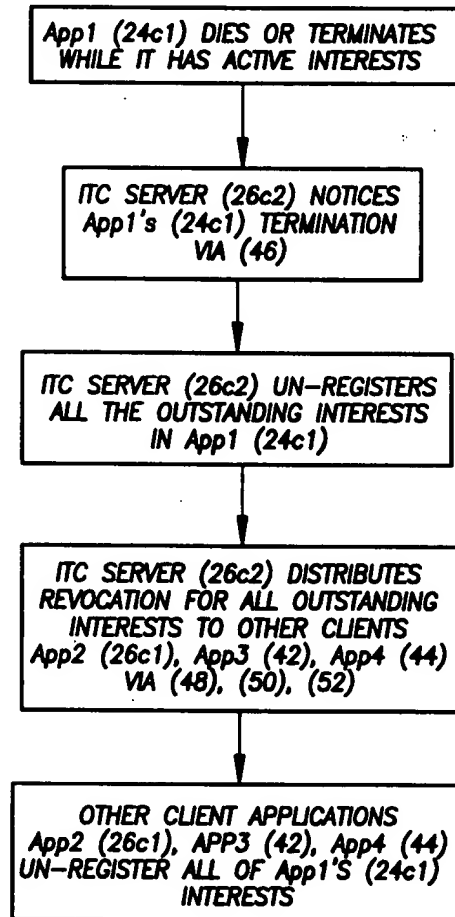


FIG. 12B





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FIG.13A

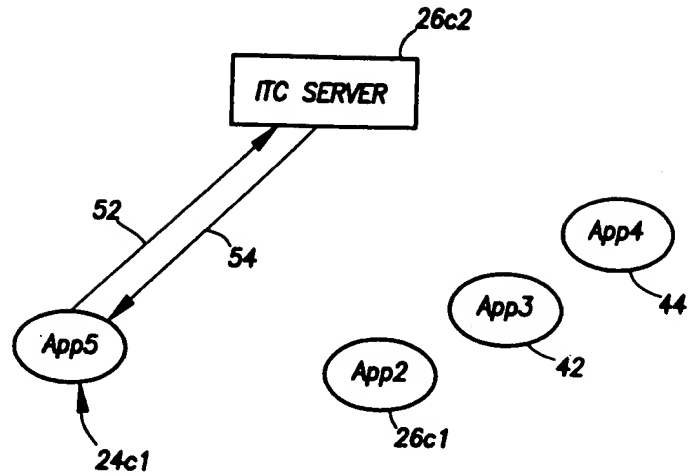
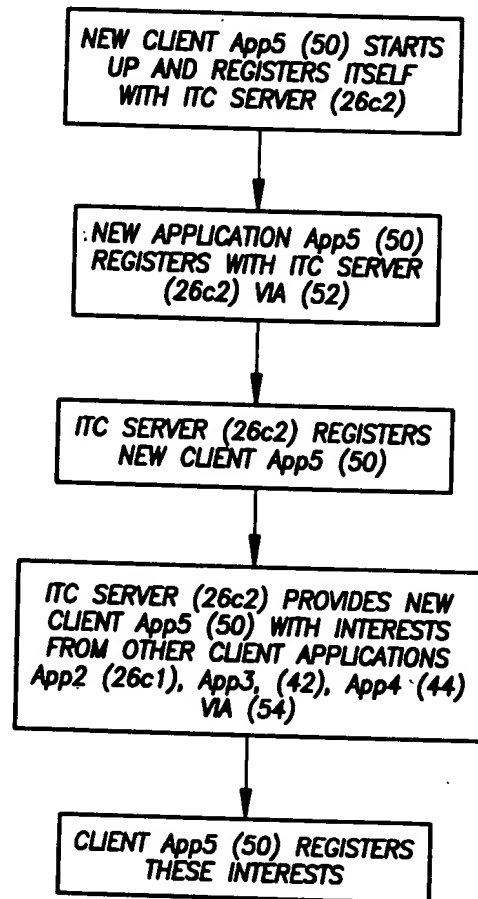


FIG.13B



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FIG. 13A

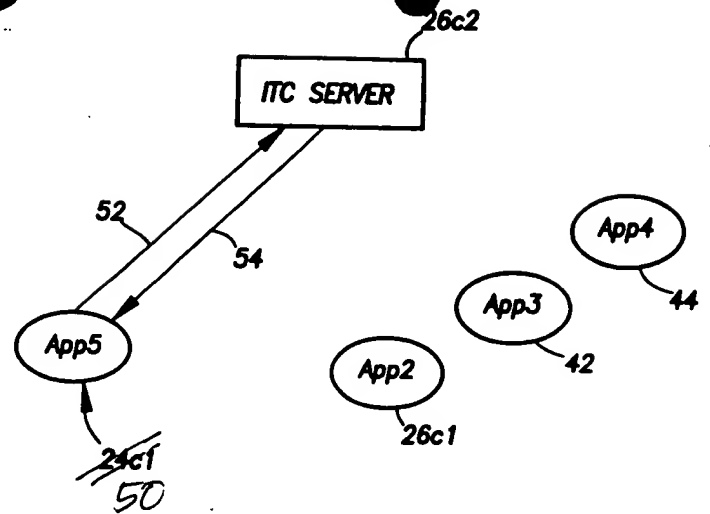
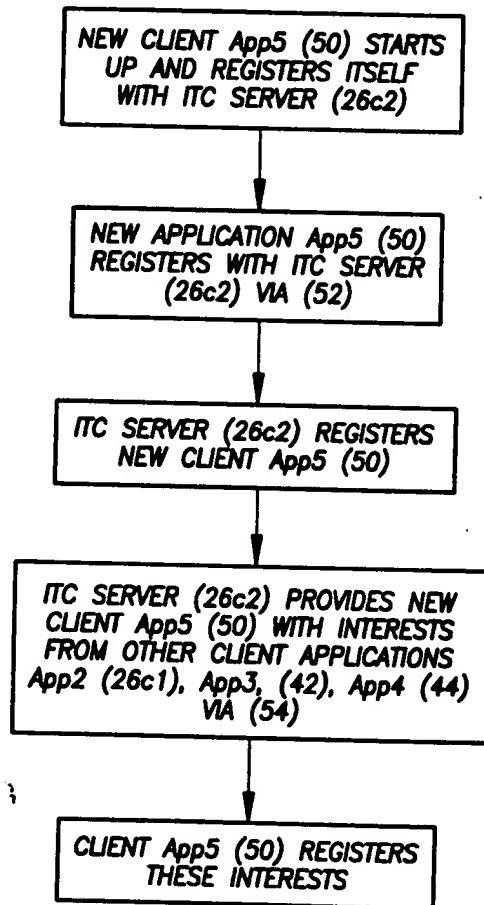


FIG. 13B



64a1 64a2 64a3

• EVENT FILTER 64

FIG. 15A

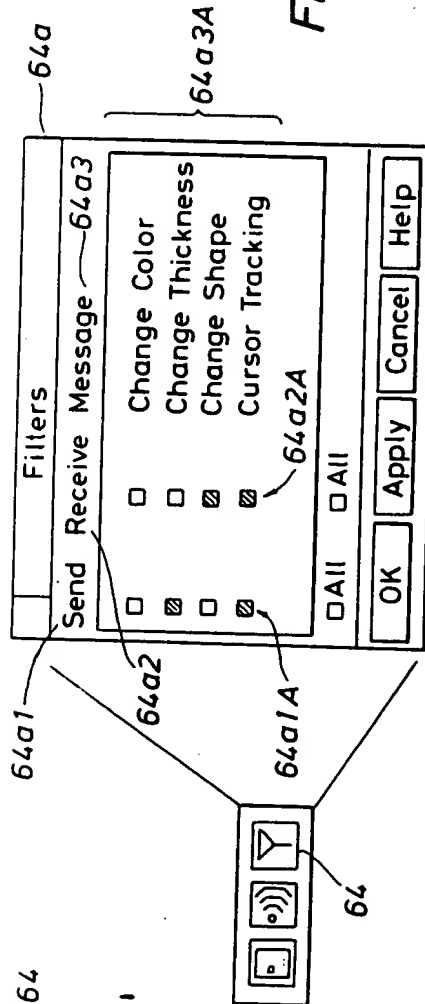


FIG. 15C

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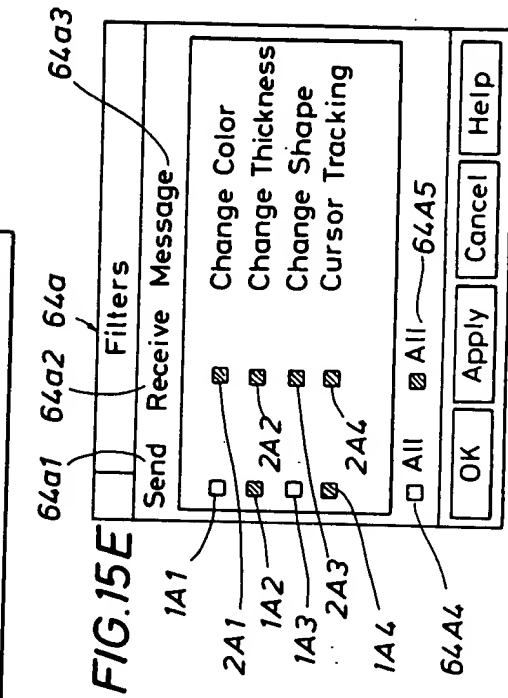


FIG. 15E

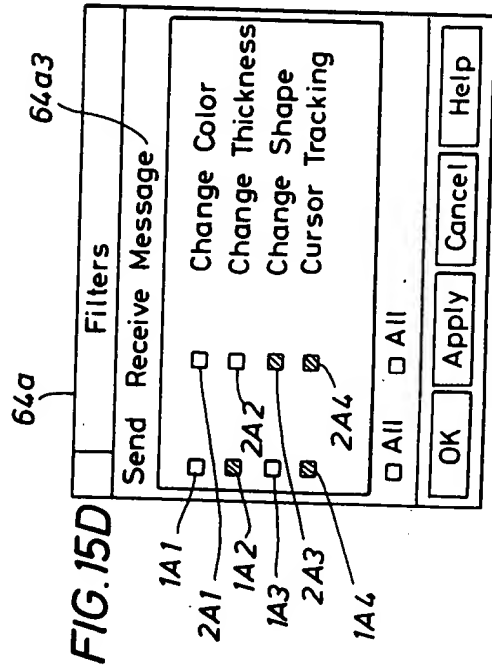
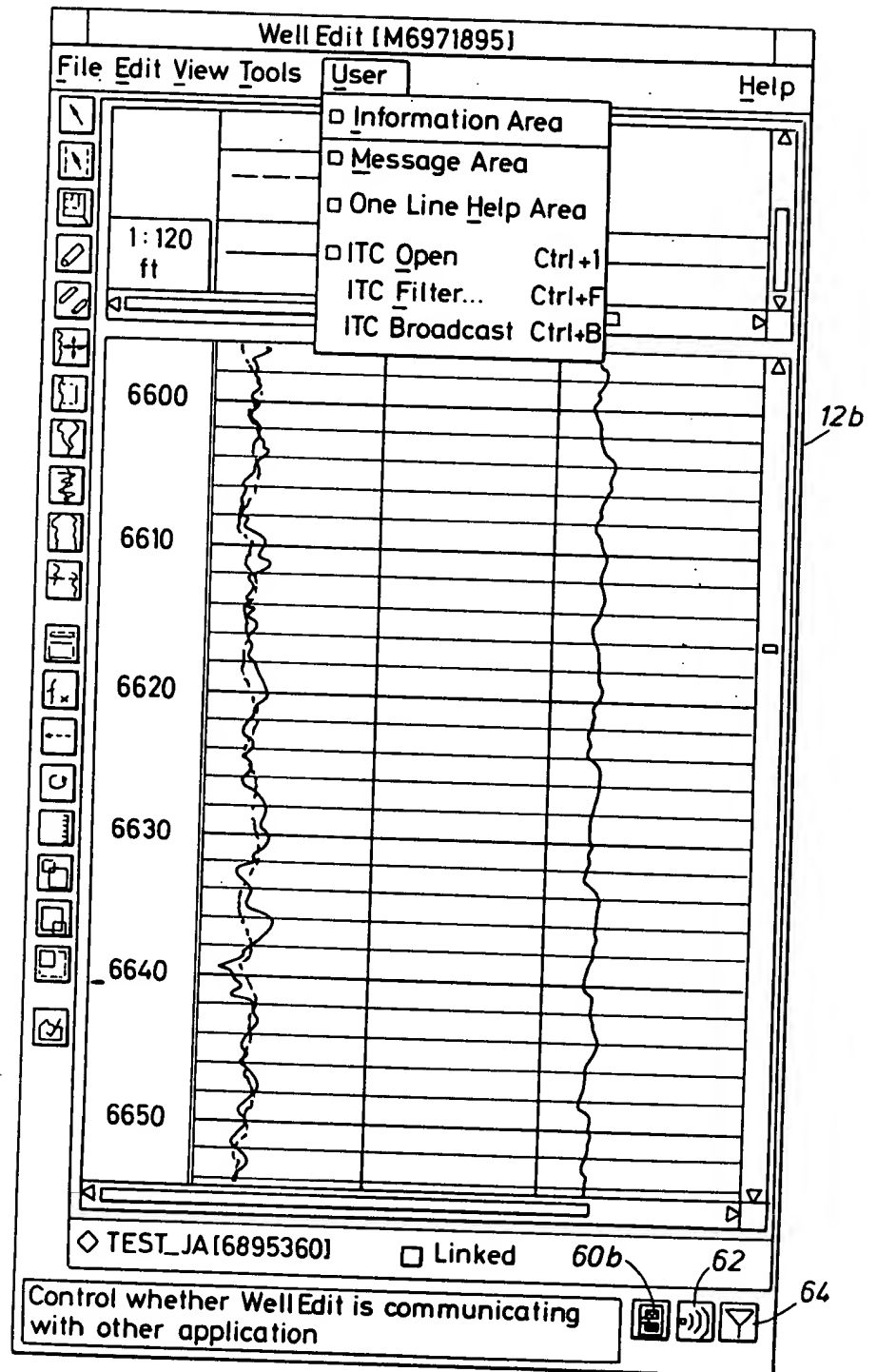


FIG. 15D

FIG. 16

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126

609

62

15/24

FIG. 18

12b

WellSketch Borehole Selection

Query from

Boreholes

UWI	Status	Driller Depth	Logger Depth
CASTILLA 9	active		
CASTILLA 9 @ WILDCAT			
NORTH TEXAS	proposed	4000 ft	3950 ft

Selection

☒ Broadcast current selection

FIG. 19

12b

60a 62

Collection Editor --- User Collection [C2534232]

Name

Code

Elements

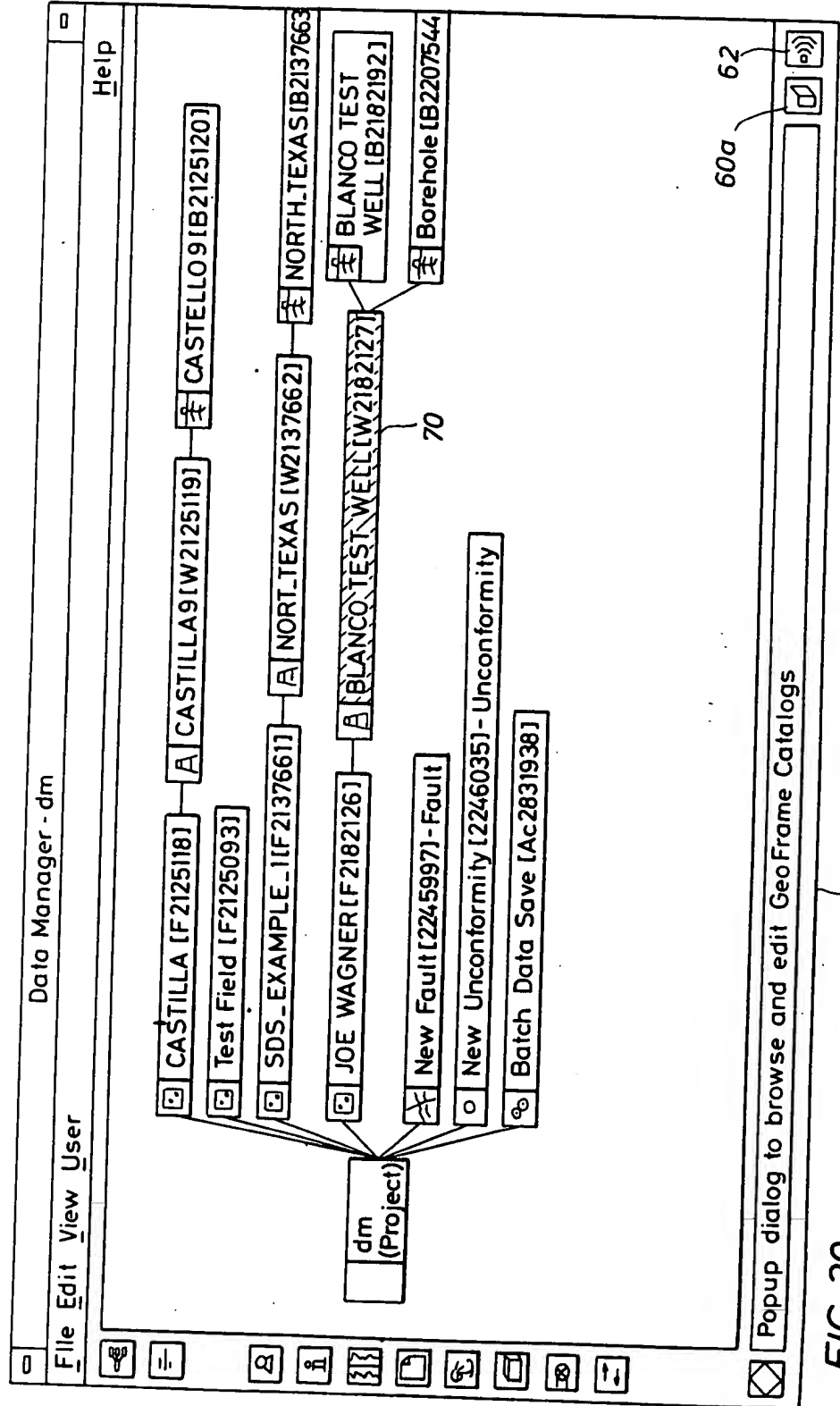
Type	Element
P	WS_GPD_L_FILE [P2752715] wu_wellsketch/wellsketch
P	GPD_L_SUMMARY_DI [P2752717] # NULL
	NORTH_TEXAS [B2467872]
	Borehole_Equipment [2476970]
	WellSketch_widmer [Ac2752677]
	TENS.DITE __.011.DITE [A2467090]

Remarks

General Attribute Editor

☒ Pops up the Application Manager

657750 6003260



Sheet 2000000

Well Editor -- BLANCO TEST WELL [W2182127]										72
Name	BLANCO TEST WELL	Spud Date	NULL	API	NULL					
Company	NULL	UWI	BLANCO TEST WELL	Region...						
Surface Location										
Projection	[tys [2124963]-Albers Equal-Area Conic]	X(ft)	NULL	Y(ft)	NULL					
Status										
Well Status	Absent	H2S Flag	Absent							
Boreholes										
<div> <div> <div>BLANCO TEST WELL [B21821921]</div> <div>Borehole [B2207544]</div> </div> <div> <div>Create</div> <div>Edit...</div> <div>Delete...</div> </div> </div>										
Remarks										
<div> <div>State/Country Code</div> <div>State NULL</div> <div>Country</div> </div>										
General Attribute Editor...										
<div> <div>OK</div> <div>Apply</div> <div>Reset</div> <div>Cancel</div> <div>Help</div> </div>										
<div> <div>Create a New Object in the DataBase</div> <div> <div>74</div> <div>60a</div> <div>62</div> </div> </div>										

FIG. 21



FIG. 22

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Field Editor... JOE WAGNER [F2182126]

Name

Wells

Type	Name	UWI	Well Status
A	BLANCO TESTWELL [W2182127]		BLANCO TESTWELL

Remarks

☒ Any type of remarks added to an entity instance

FIG. 23

12b4

60c

62

Attribute Editor

Name

Type

Attributes...

API Country Code	<input type="text"/>
Code	<input type="text" value="Well"/>
Create Date	<input type="text" value="Jul 29 14:24 1996"/>
Field Name	<input type="text"/>
Name	<input type="text" value="BLANCO TEST WELL"/>
Project	<input type="text" value="dm (Project)"/>
Source	<input type="text" value="DLIS_Load"/>
UWI	<input type="text" value="BLANCO TEST WELL"/>

☒ Save Changes in DataBase and Close the Window

FIG. 24

12b5

Field Editor... JOE WAGNER(F2182126)

Name: JOE WAGNER

Wells

Type	Name	UWI	Well Status
	BLANCO TEST WELL	(W2182127)	BLANCO TEST WELL

Remarks

This is a Test Field

General Attribute Editor...

OK Apply Reset Cancel Help

☒ Any type of remarks added to an entity instance

76 60c 62

FIG. 25

12b6

GeoFrame Application Manager

Schlumberger GeoQuest

Project: dm Activity: None

Products

GEOLOGY	PETROPHYSICS	RESERVOIR
VISUALIZATION	SEISMIC	UTILITY

Managers

PROJECT	PROCESS	DATA
---------	---------	------

Exit Help

View GeoFrame process messages

78 78

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FIG.26

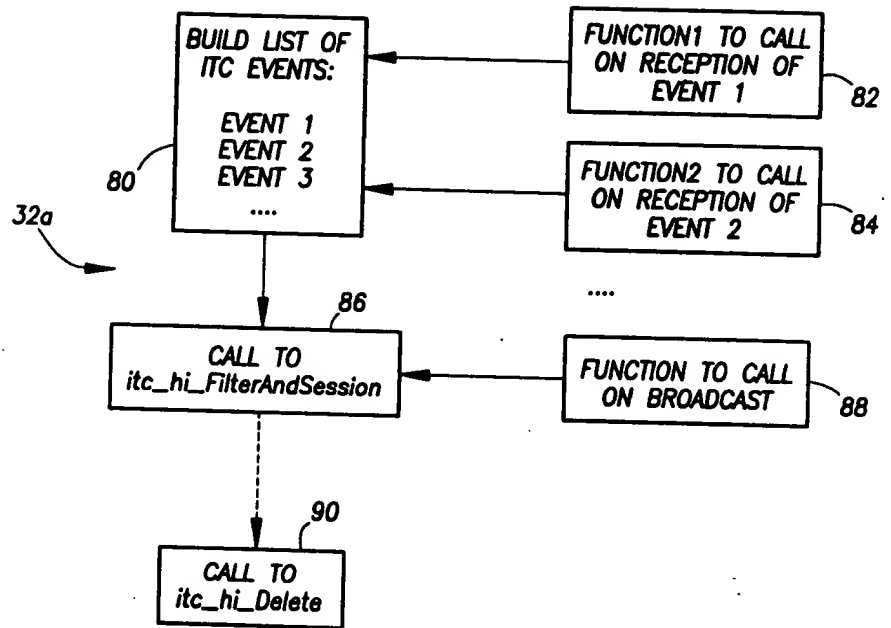


FIG.26A

BUILD LIST OF ITC EVENTS	
EVENT 1	INTEREST OBJECT 1
EVENT 2	INTEREST OBJECT 2
EVENT 3	INTEREST OBJECT 3
⋮	⋮
EVENT N	INTEREST OBJECT N

Labels: 80 (top), 80a (bottom left), 80b (bottom right)

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FIG.27

```

#include <wk_itc_hi/itc_hi_public.h>
#include <wk_itc_hi/itc_hi_synonym.h>
#include <wk_itc_data/itc_diselection.h>
...
void
udm_SingleDIEditor::PopulateEventList(void)
{
    itc_hi_EventInfo_t Event;

    /* Initialize the filter info list */
    Event =
320 (itc_hi_EventInfo_t)utl_CallocBlock(sizeof(itc_hi_EventInfo_st));

    Event->EventToken      = qITC_DISELECTION;
    Event->EventHIName     = qDISELECTION;
    Event->SendToggleState = ITC_ON;
    Event->ReceiveToggleState = ITC_ON;
    Event->ReceiveEventCB = ReceiveDISelection_cb;
    Event->ReceiveEventCBData = (vt_Datum_t) this;

    EventList = (itc_hi_EventInfo_t)vt_CreateList(vt_DatumL_vt, 1);
    vt_AddToList((itc_hi_EventInfo_t)EventList, (vt_Datum_t)Event);
}

void
udm_SingleDIEditor::SetupITC(void)
{
    itc_Status_t MyStat;

    ...
    //Populate the eventlist
    PopulateEventList();

    //Set ITC HI for this SubModule Run
    ITCBanner = itc_hi_FilterAndSession(
        SubModuleRun,
        ITCForm,
        OneLineHelp,
        EventList,
        ITC_CLOSED,
        BroadcastDISelection_cb,
        (XtPointer) this,
        &MyStat);

    ...
    //Free Event List and elements
    itc_hi_EventInfo_t Event = (itc_hi_EventInfo_t) vt_Nth(EventList, 0);
    if(Event)
        utl_FreeBlock(Event);
    vt_DeleteList(EventList);
    EventList = NULL;
    ....
}

```

FIG.28

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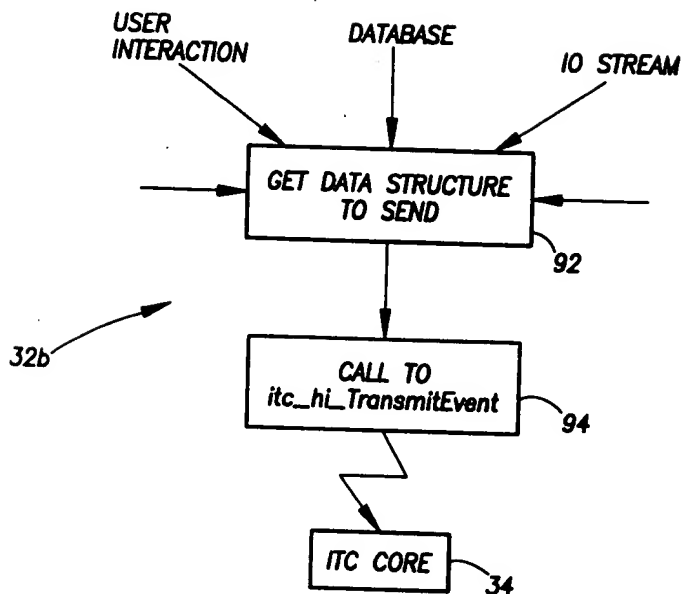


FIG.29

```

#include <wk_itc_hi/itc_hi_public.h>
...
void
udm_ObjectListInfo::SendSubDI(void)
{
    itc_Status_t ITCStat;
    aqi_DataItem_t DisToSend = GetSelection();
    itc_hi_t Banner = NULL;

    if (!DisToSend)
        DisToSend = (aqi_DataItem_t)vt_CreateList(vt_DatumL_vt, 2);
    DisToSend = (aqi_DataItem_t)vt_AddToList((vt_DatumL_t)DisToSend,
        (vt_Datum_t)DataItem);

    Banner = Manager->GetITCBanner();

    if (Banner && DisToSend)
    {
        itc_hi_TransmitEvent(
            Banner,
            EventHiName,
            (vt_Datum_t)DisToSend,
            &ITCStat);
        vt_DeleteList(DisToSend);
    }
}
  
```

The code block shows a C++ function `udm_ObjectListInfo::SendSubDI(void)`. It includes a header file `<wk_itc_hi/itc_hi_public.h>`. The function declares `itc_Status_t ITCStat`, `aqi_DataItem_t DisToSend`, and `itc_hi_t Banner`. It checks if `DisToSend` is null and creates a list if so. It then adds a data item to the list. It gets a banner from the manager. If both banner and `DisToSend` are present, it calls `itc_hi_TransmitEvent` with the banner, event name, data item, and `ITCStat`. Finally, it deletes the list.

FIG.30

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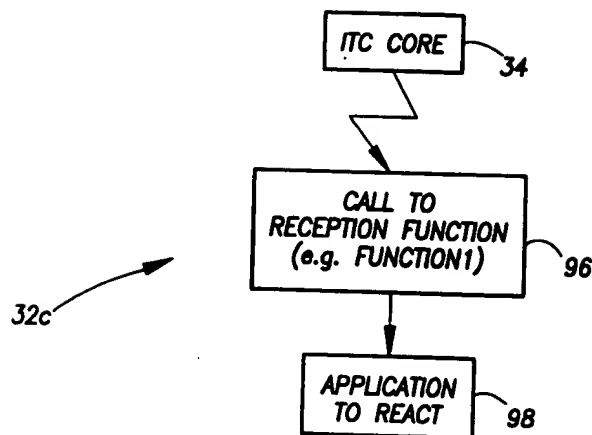


FIG.31

```

void
udm_WellDataManager::CheckAndReact (aqi_Data_ItemL_t SelectDataItems)
{
    Int32_t Count = vt_LengthList(SelectedDataItems);
    for(int i = 0; i < Count; i++)
    {
        aqi_DataItem_t DI = (aqi_DataItem_t)vt_Nth(SelectedDataItems, i);
        DIType = gdm_GetDIType(DI);

        // I do nothing if I receive "myself"
        if(DI != DataItem)
        {
            if(DIType == qWell)
            {
                SwitchDataItem(DI);
                break;
            }
            if(DIType == qBorehole)
            {
                vt_DatumL_t ObjList = GetSubList();
                if(ObjList)
                {
                    Int32_t Count2 = vt_LengthList(ObjList);
                    for(int j = 0; j < Count2; j++)
                    {
                        udm_ObjectListInfo *Elt =
                            (udm_ObjectListInfo*)vt_Nth(ObjList, j);
                        Elt->Select(DI);
                    }
                    break;
                }
            }
        }
    }
}
  
```

The code block shows a C++ function `udm_WellDataManager::CheckAndReact` that iterates through a list of data items. It checks the type of each item (Well or Borehole) and performs specific actions based on the type. A comment indicates that it does nothing if it receives 'myself'. A label '32c' with an arrow points to the `if(DI != DataItem)` condition.

601 600 600 600

FIG. 32

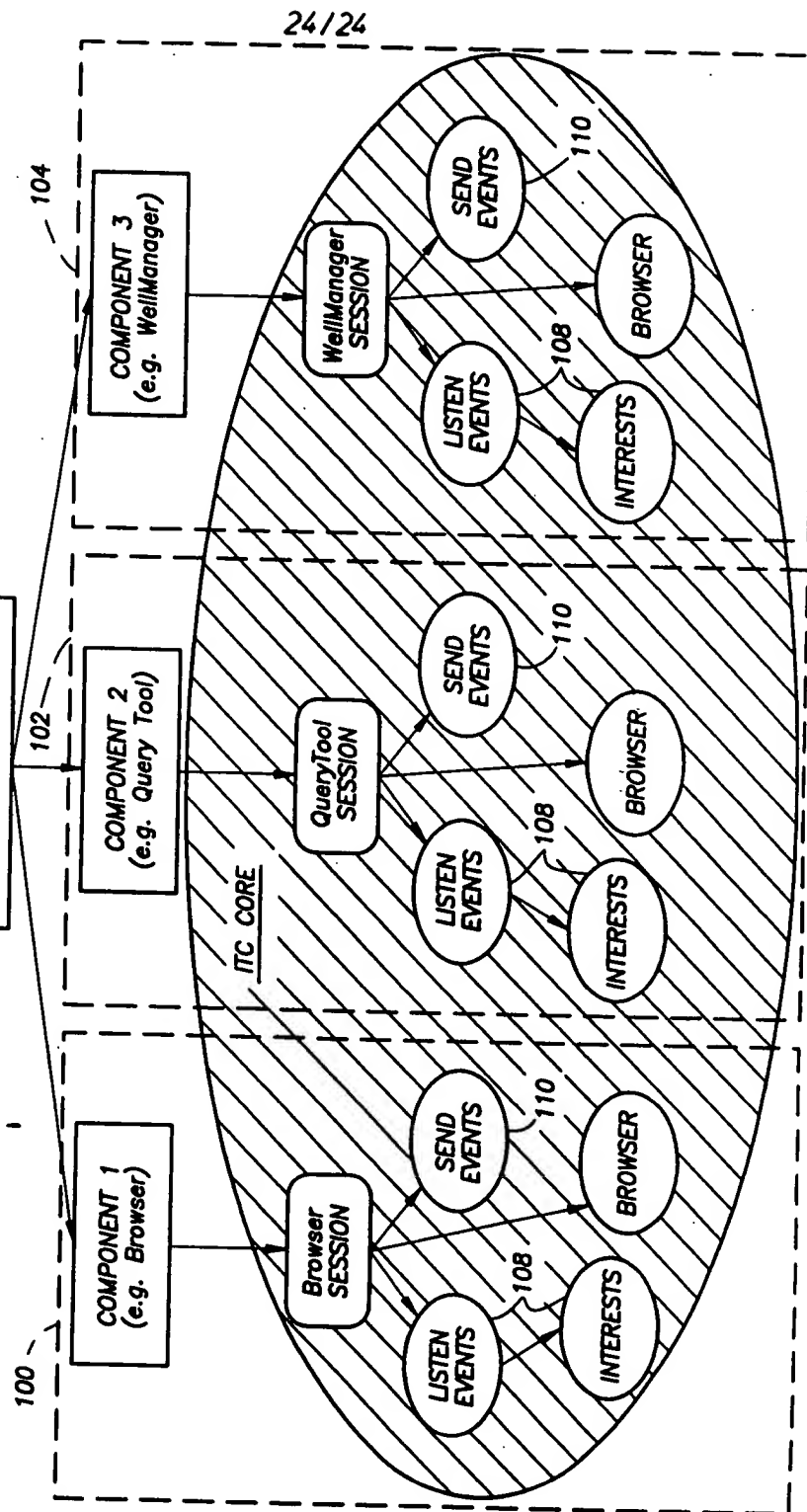


FIG. 1

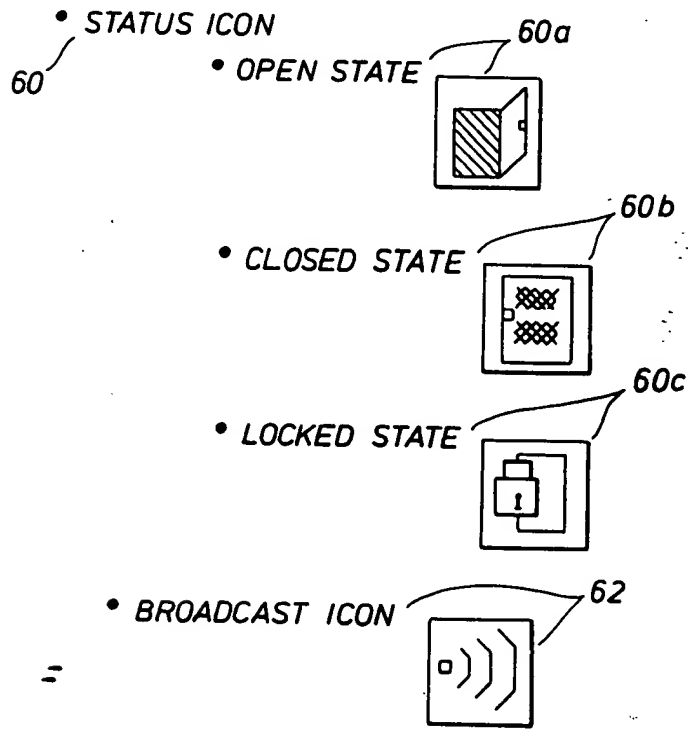
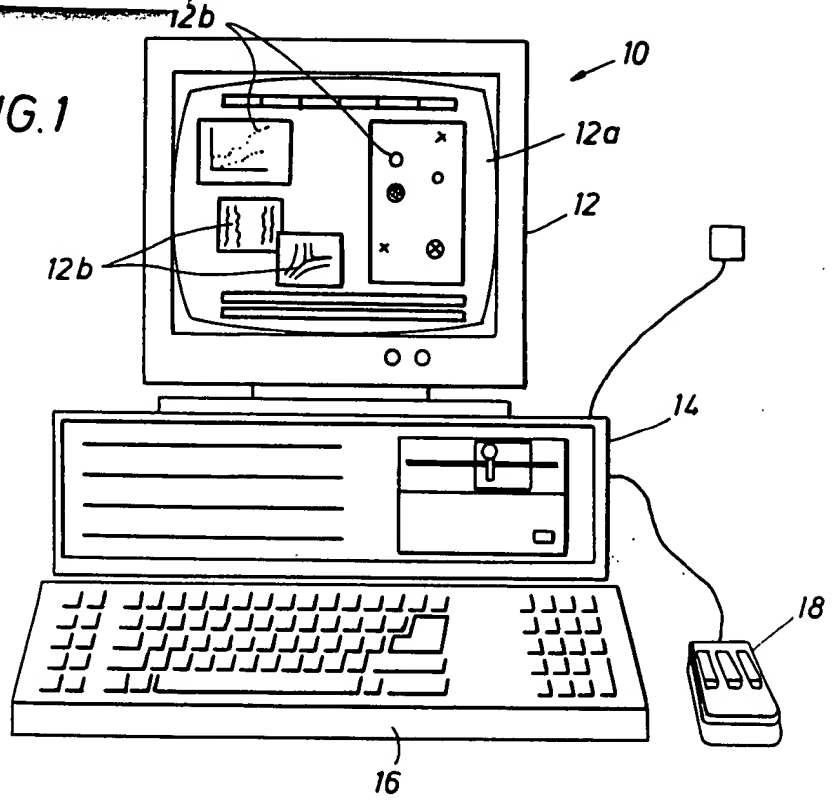
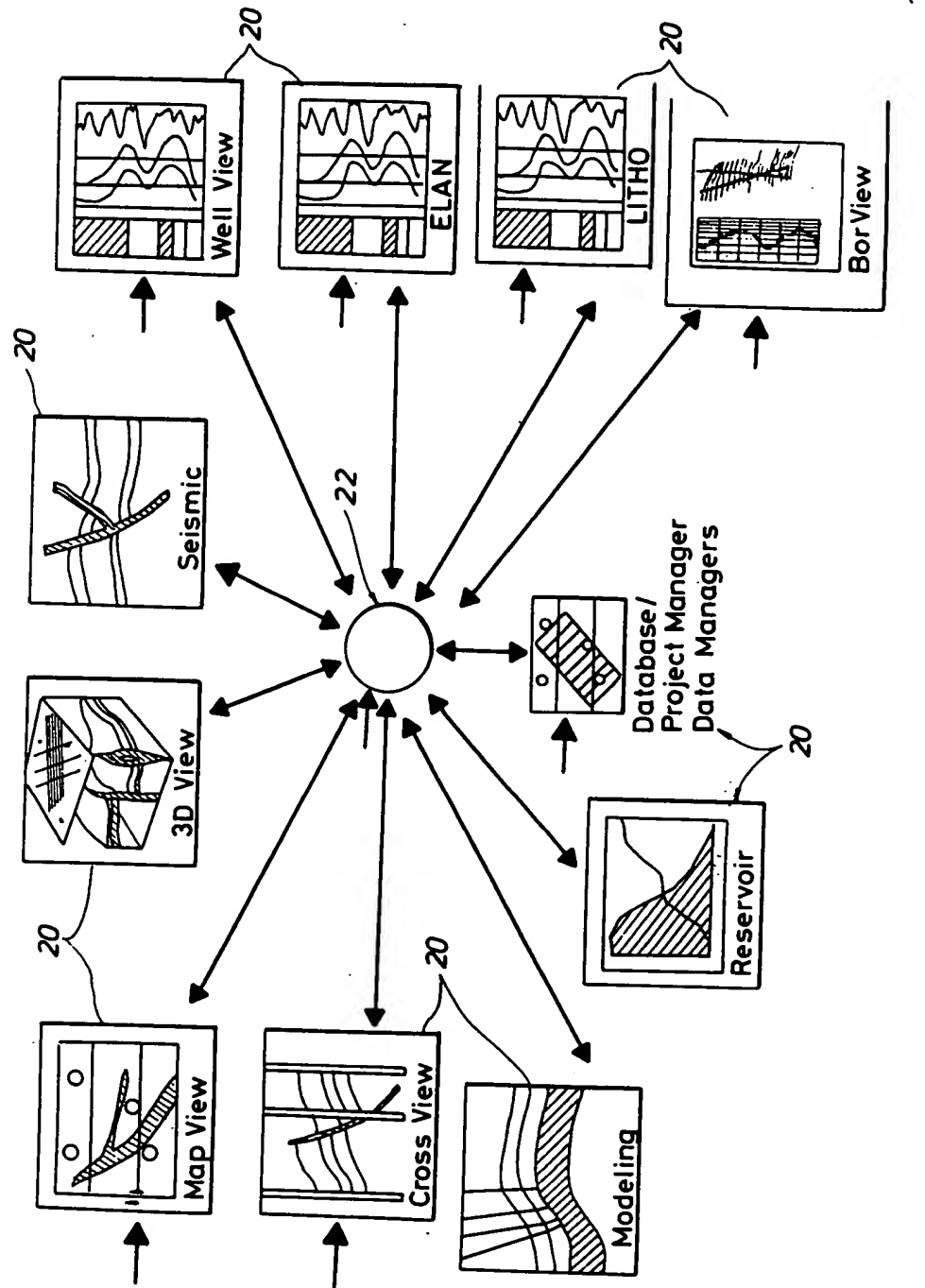


FIG. 14

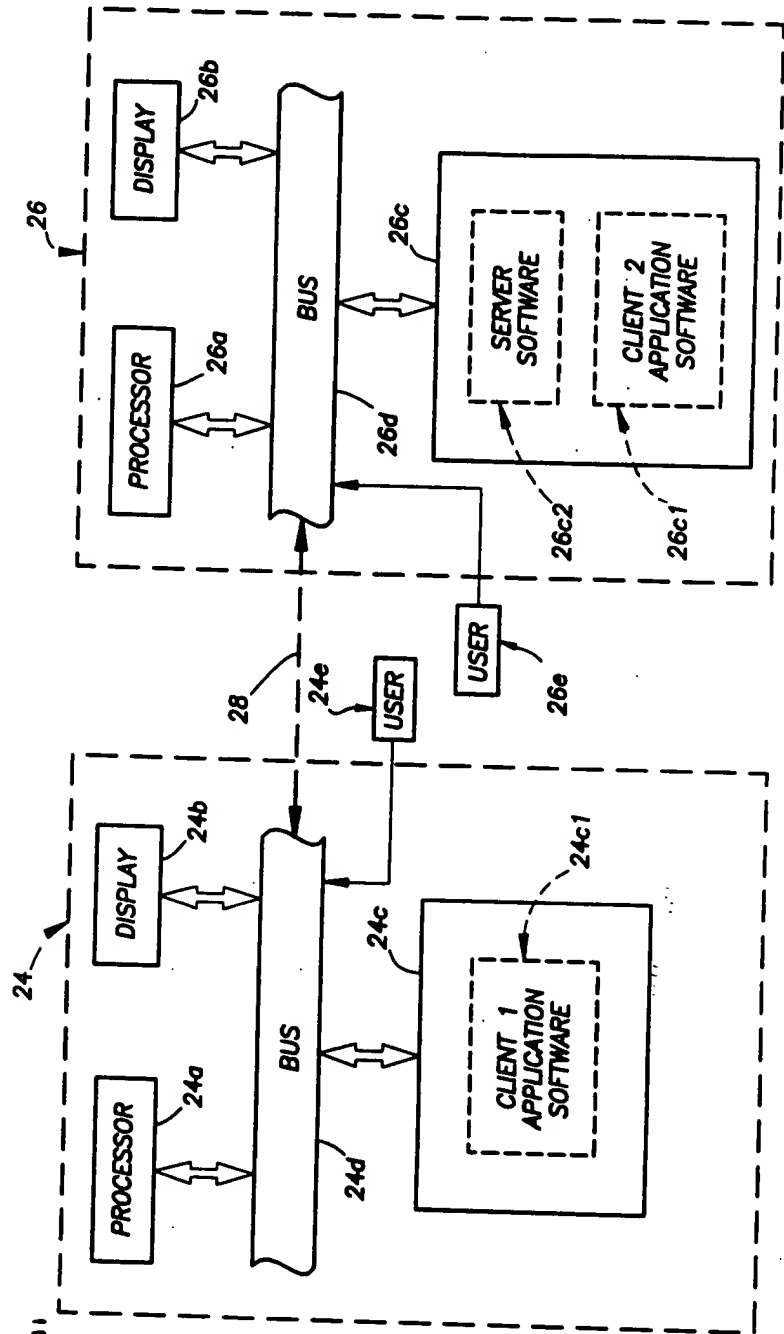


FIG. 2 2/24



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FIG. 3



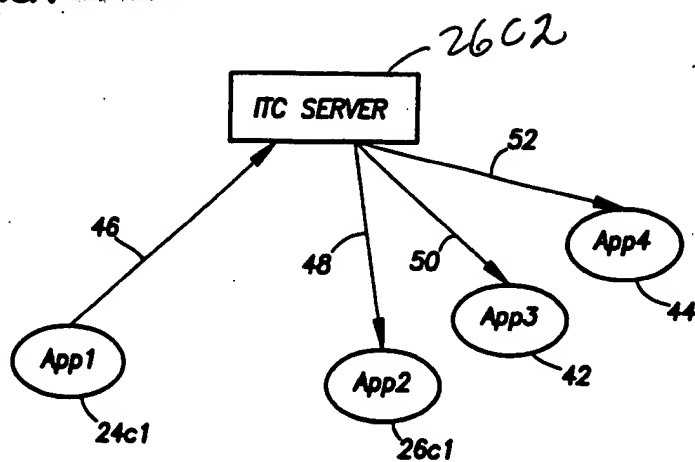
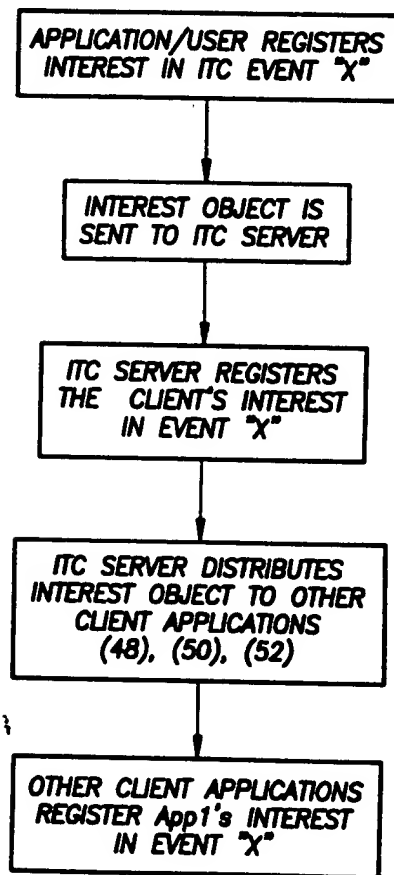


FIG.8B



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FIG.9A

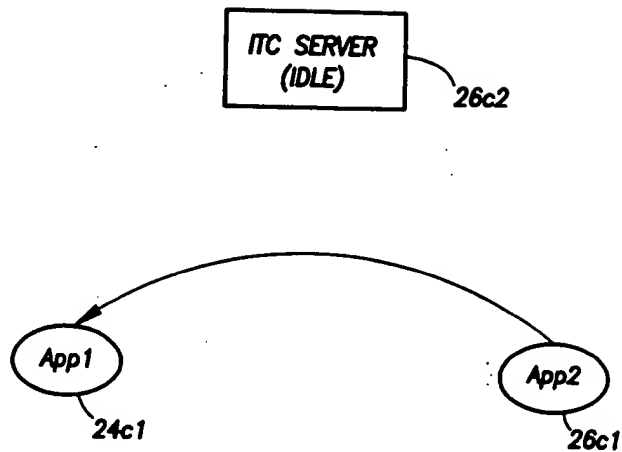
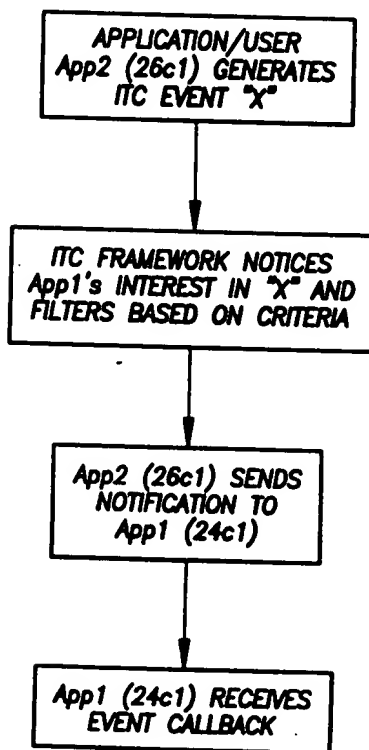


FIG.9B



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FIG. 10A

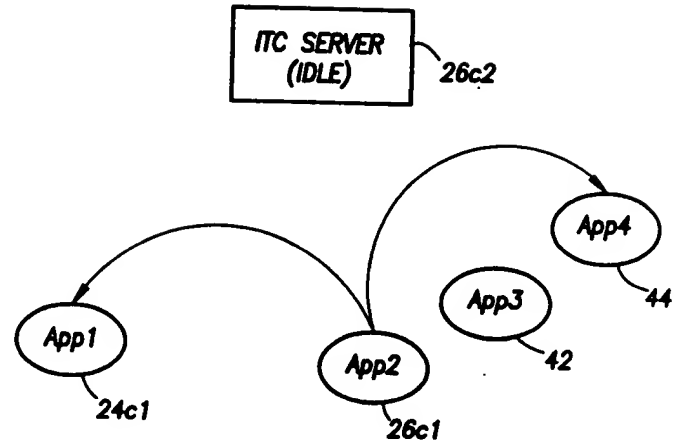


FIG. 10B

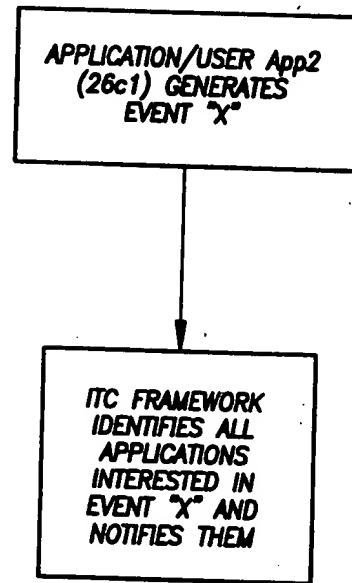


FIG. 11A

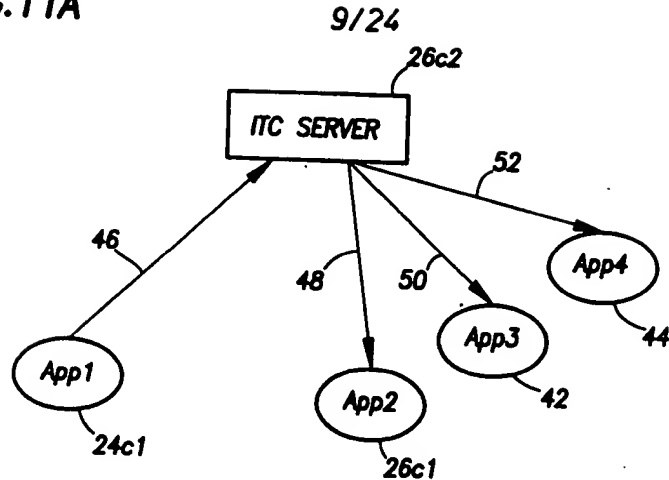


FIG. 11B

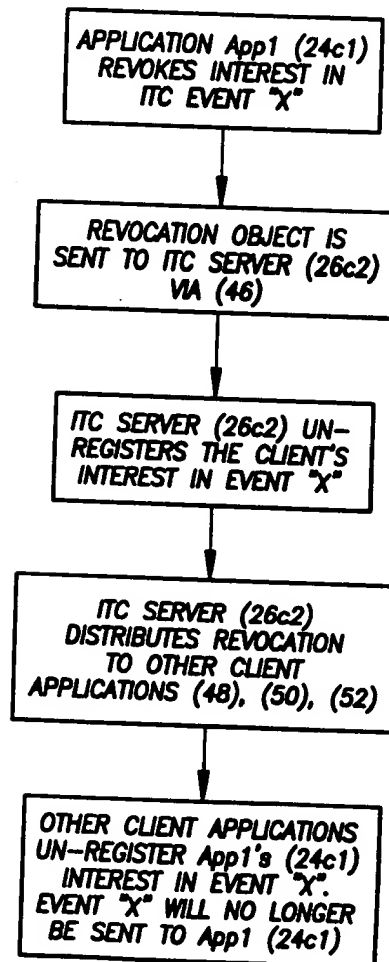


FIG. 12A

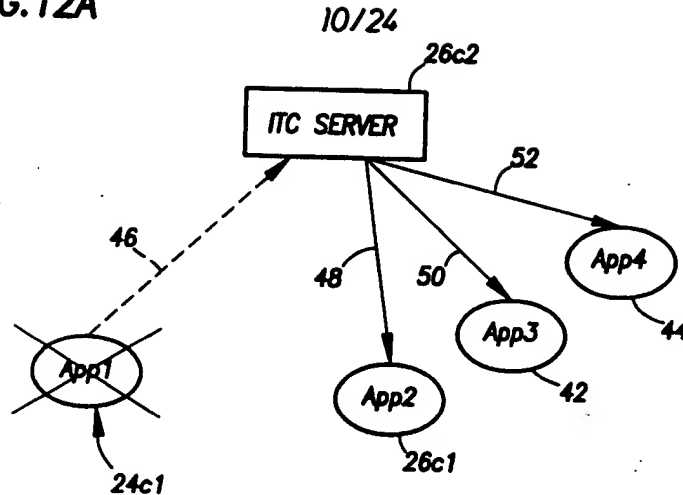
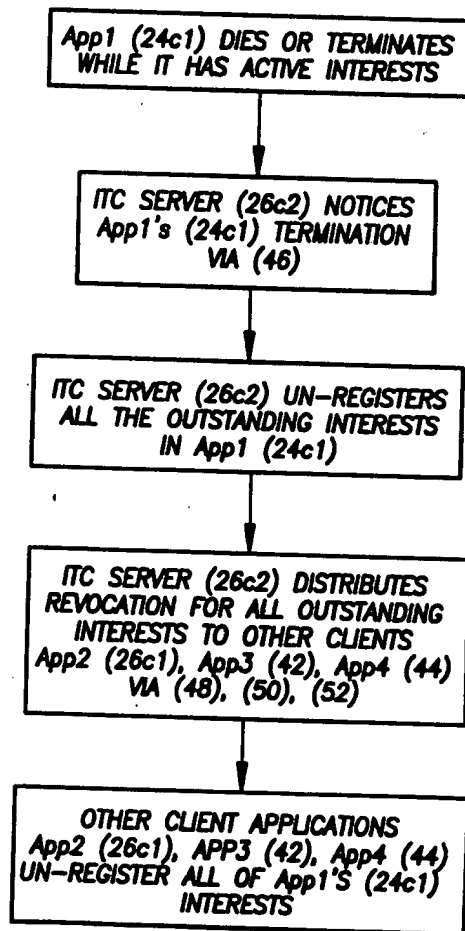


FIG. 12B



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FIG. 13A

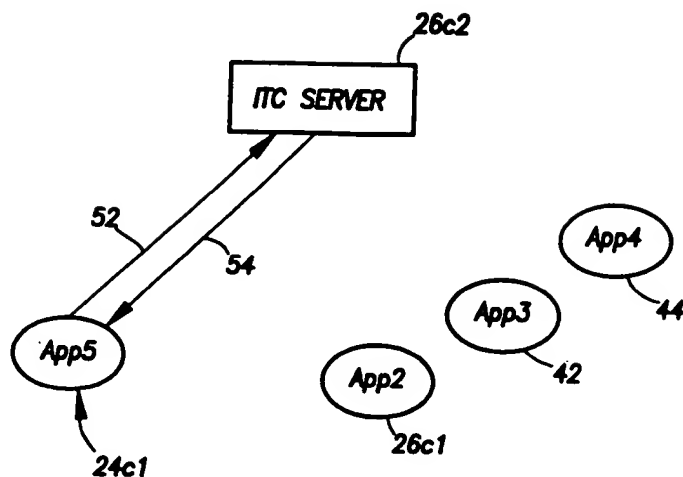


FIG. 13B

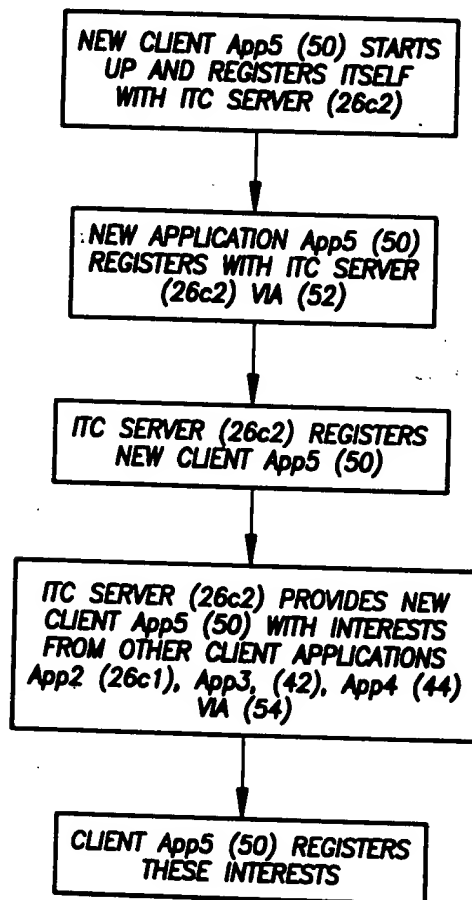




FIG. 13A

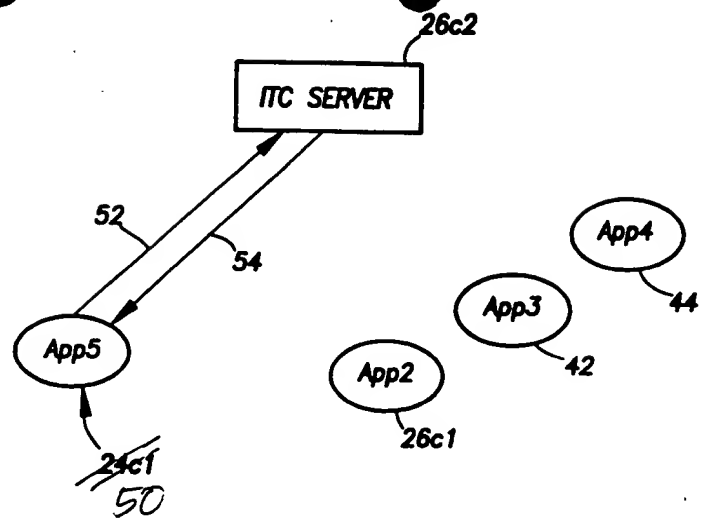
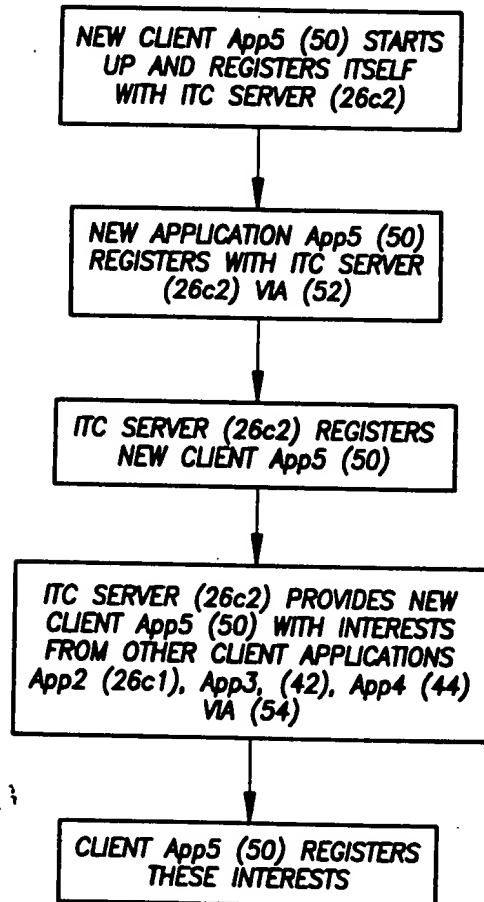


FIG. 13B



• EVENT FILTER 64



FIG. 15A

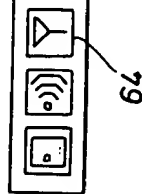


FIG. 15B

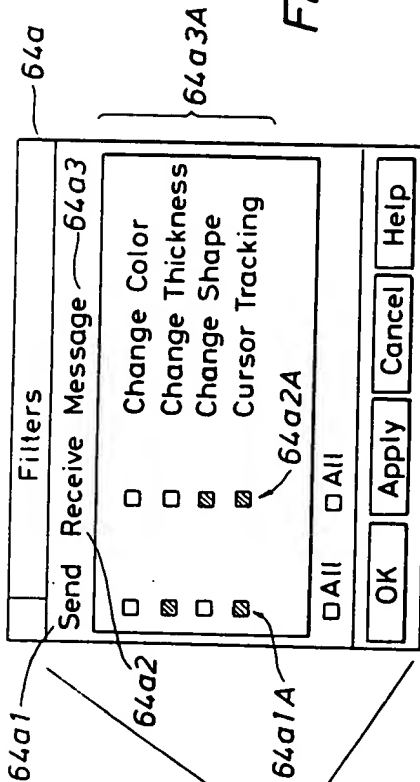


FIG. 15C

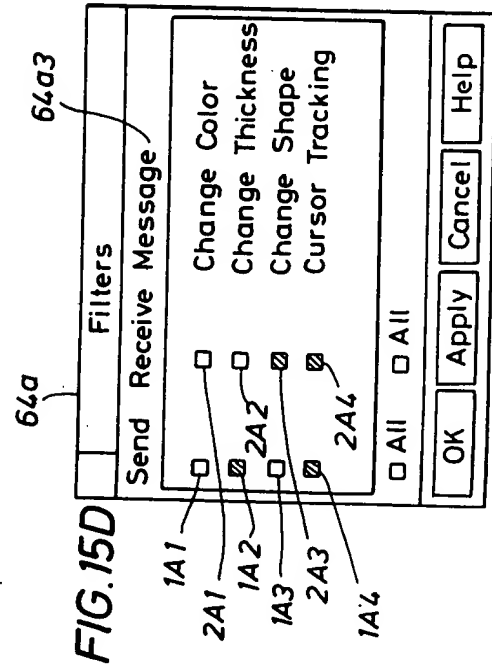


FIG. 15D

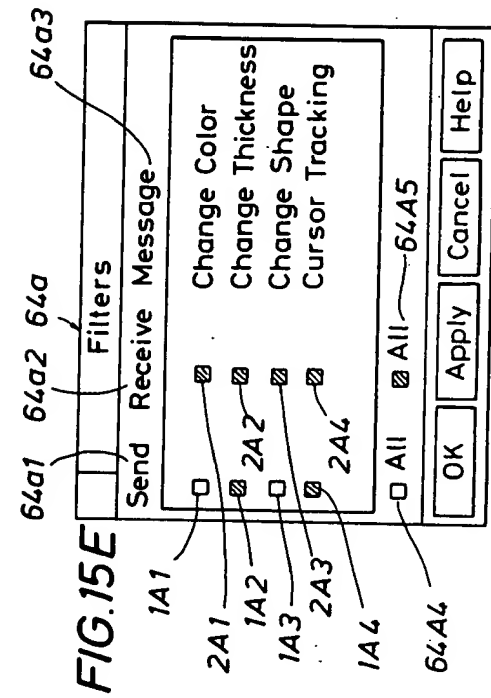
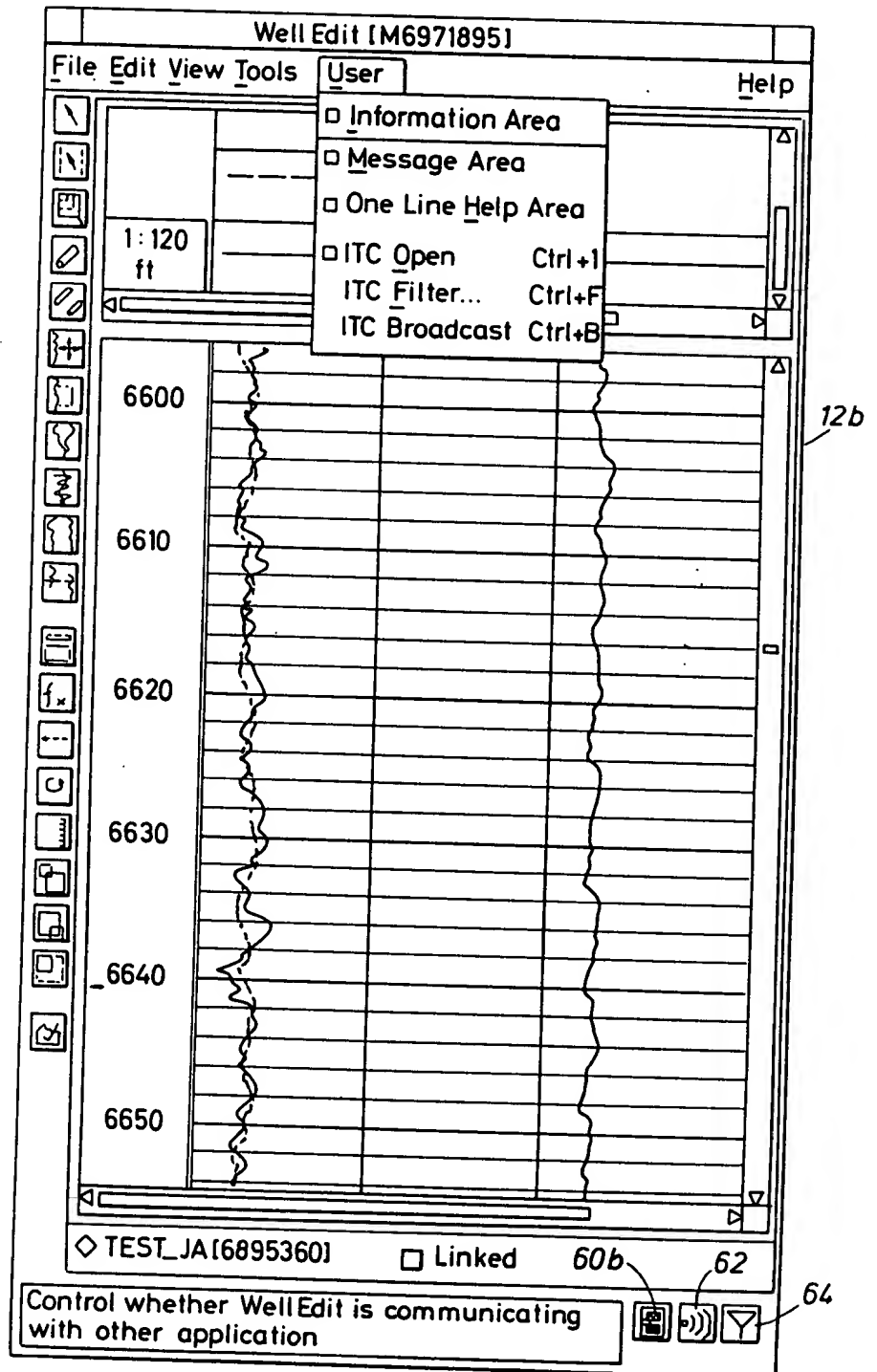


FIG. 15E

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FIG. 16

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FIG. 17

12b

60b

62

Array Selection

Query from Well Sketch [M2752679]

Array Code C\*

Arrays

Code	Modifier	Start	Stop	Service	Run	Description
CALI	DITE	3949.5 ft	3900 ft	DITE	.011	Caliper
CCSW	DITE	3949.5 ft	3900 ft	DITE	.011	Composite CCS/CTS Telemetr.
CFTC	DITE	3949.5 ft	3900 ft	DITE	.011	Corrected For Thermal Counts
CILD	DITE	3949.5 ft	3900 ft	DITE	.011	Calibrated Induction Deep...
CILM	DITE	3949.5 ft	3900 ft	DITE	.011	Calibrated Induction Medium
CNTC	DITE	3949.5 ft	3900 ft	DITE	.011	Corrected Near Thermal Counts
CS	DITE	3949.5 ft	3900 ft	DITE	.011	Cable Speed
CSFA	DITE	3949.5 ft	3900 ft	DITE	.011	SFL Conductivity (Averaged)
CSFL	DITE	3949.5 ft	3900 ft	DITE	.011	SFL Conductivity

Selection CILM.DITE .011 DITE [A2468008]

OK
Cancel
Help

Open/Close ITC Connection

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FIG. 18

12b

WellSketch Borehole Selection

Query from

Boreholes

UWI	Status	Driller Depth	Logger Depth
CASTILLA 9	active		
CASTILLA 9 @ WILDCAT			
NORTH TEXAS	proposed	4000 ft	3950 ft

Selection

☒ Broadcast current selection

FIG. 19

12b

60a 62

Collection Editor --- User Collection [C2534232]

Name

Code

Elements

Type	Element
P	WS_GPDL_FILE [P2752715] wu_wellsketch/wellsketch
P	GPDL_SUMMARY_DI [P2752717] # NULL
	NORTH_TEXAS [B2467872]
	Borehole_Equipment [2476970]
	WellSketch_widmer [Ac2752677]
	TENS.DITE __.011.DITE [A2467090]

Remarks

General Attribute Editor

☒ Pops up the Application Manager



FIG. 20

12b1

657730 2209260

Well Editor -- BLANCO TEST WELL [W2182127]		72
Name [BLANCO TEST WELL]	Spud Date [NULL]	API [NULL]
Company [NULL]	UWI [BLANCO TEST WELL]	Region...
Surface Location		
Projection [tys [2124963]-Albers Equal-Area Conic]	X(ft) [NULL]	Y(ft) [NULL]
Status		
Well Status [Absent]	H2S Flag [Absent]	
Boreholes		
<div> <div>BLANCO TEST WELL [B2182192]</div> <div>Borehole [B2207544]</div> </div> <div> <input type="button" value="Create"/> <input type="button" value="Edit..."/> <input type="button" value="Delete..."/> </div>		
State/Country Code		
State [NULL]	Country [ ]	
Remarks		
General Attribute Editor...		
OK	Apply	Reset
<input checked="" type="checkbox"/> Create a New Object in the DataBase		
Cancel		Help
<input type="button" value="Print"/> <input type="button" value="Help"/>		<input type="button" value="Print"/> <input type="button" value="Help"/>

FIG. 21

FIG. 22

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12b3

Field Editor... JOE WAGNER [F2182126]

Name

Wells

Type	Name	UWI	Well Status
A	BLANCO TEST WELL	[W2182127]	BLANCO TEST WELL

Remarks

☒ Any type of remarks added to an entity instance

FIG. 23

12b4

60c

62

Attribute Editor

Name

Type

Attributes...

API Country Code	<input type="text" value="Well"/>
Create Date	<input type="text" value="Jul 29 14:24 1996"/>
Field Name	<input type="text" value="BLANCO TEST WELL"/>
Project	<input type="text" value="dm (Project)"/>
Source	<input type="text" value="DLIS_Load"/>
UWI	<input type="text" value="BLANCO TEST WELL"/>

☒ Save Changes in DataBase and Close the Window



FIG. 24

12b5

Field Editor...JOE WAGNER[F2182126]

Name

Wells

Type	Name	UWI	Well Status
	BLANCO TEST WELL [W2182127]		BLANCO TEST WELL

Remarks  
This is a Test Field

General Attribute Editor...

OK Apply Reset Cancel Help

☒ Any type of remarks added to an entity instance

76 60c 62

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GeoFrame Application Manager

Schlumberger GeoQuest

Project dm Activity None

Products

GEOLOGY	PETROPHYSICS	RESERVOIR
VISUALIZATION	SEISMIC	UTILITY

Managers

PROJECT	PROCESS	DATA
---------	---------	------

Exit Help

View GeoFrame process messages

78 78

FIG. 25

12b6

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FIG.26

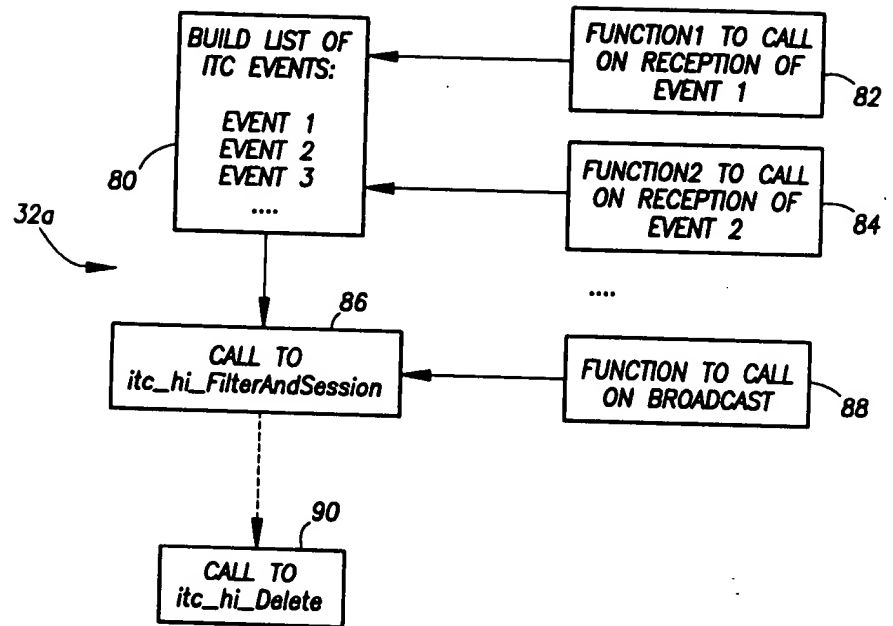


FIG.26A

BUILD LIST OF ITC EVENTS	
EVENT 1	INTEREST OBJECT 1
EVENT 2	INTEREST OBJECT 2
EVENT 3	INTEREST OBJECT 3
⋮	⋮
EVENT N	INTEREST OBJECT N

80a points to the first column (EVENT 1, EVENT 2, EVENT 3, ⋮, EVENT N). 80b points to the second column (INTEREST OBJECT 1, INTEREST OBJECT 2, INTEREST OBJECT 3, ⋮, INTEREST OBJECT N). 80 points to the table header.

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FIG.27

```

#include <wk_itc_hi/itc_hi_public.h>
#include <wk_itc_hi/itc_hi_synonym.h>
#include <wk_itc_data/itc_diselection.h>
...
void
udm_SingleDIEditor::PopulateEventList(void)
{
    itc_hi_EventInfo_t Event;

    /* Initialize the filter info list */
    Event =
32a (itc_hi_EventInfo_t)utL_CallocBlock(sizeof(itc_hi_EventInfo_st));

    Event->EventToken      = qITC_DISELECTION;
    Event->EventHIName      = qDISELECTION;
    Event->SendToggleState = ITC_ON;
    Event->ReceiveToggleState = ITC_ON;
    Event->ReceiveEventCB = ReceiveDISelection_cb;
    Event->ReceiveEventCBData = (vt_Datum_t) this;

    EventList = (itc_hi_EventInfo_t)vt_CreateList(vt_Datum_t, 1);
    vt_AddToList((itc_hi_EventInfo_t)EventList, (vt_Datum_t)Event);
}

void
udm_SingleDIEditor::SetupITC(void)
{
    itc_Status_t MyStat;

    //Populate the eventlist
    PopulateEventList();

    //Set ITC HI for this SubModule Run
    ITCBanner = itc_hi_FilterAndSession(
        SubModuleRun,
        ITCForm,
        OneLineHelp,
        EventList,
        ITC_CLOSED,
        BroadcastDISelection_cb,
        (XtPointer) this,
        &MyStat);

    //Free Event List and elements

    itc_hi_EventInfo_t Event = (itc_hi_EventInfo_t) vt_Nth(EventList, 0);
    if(Event)
        utL_FreeBlock(Event);
    vt_DeleteList(EventList);
    EventList = NULL;
    ....
}

```

FIG.28

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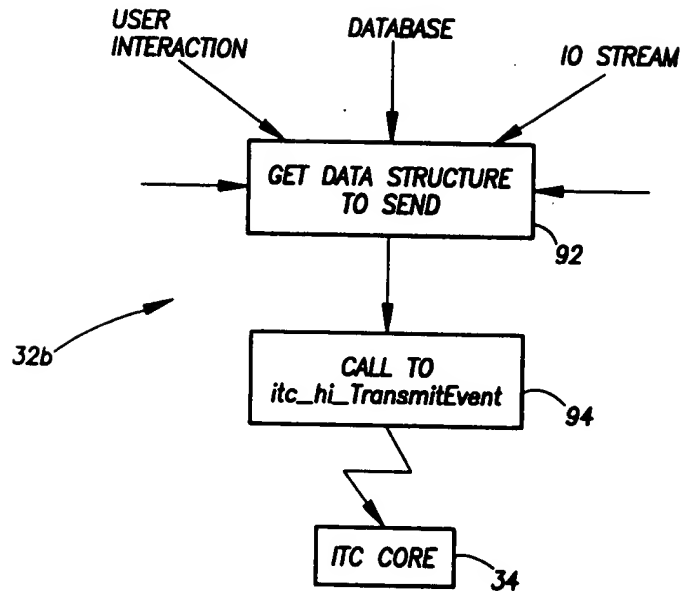


FIG.29

```

#include <wk_itc_hi/itc_hi_public.h>
...
void
udm_ObjectListInfo::SendSubDI(void)
{
    itc_Status_t ITCStat;
    aqi_DataItemL_t DIsToSend = GetSelection();
    itc_hi_t Banner = NULL;

    if (IDIsToSend)
        DIsToSend = (aqi_DataItemL_t)vt_CreateList(vt_DatumL_vt, 2);
    DIsToSend = (aqi_DataItemL_t)vt_AddToList((vt_DatumL_t)DIsToSend,
        (vt_Datum_t)DataItem);

    Banner = Manager->GetITCBanner();

    if (Banner && DIsToSend)
    {
        itc_hi_TransmitEvent(
            Banner,
            EventHName,
            (vt_Datum_t)DIsToSend,
            &ITCStat);
        vt_DeleteList(DIsToSend);
    }
}
    
```

65730 2000000

FIG. 32

